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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,850	10/08/2003	Edward L. Jones	58616US002	7119
32692	7590	04/06/2005		EXAMINER
3M INNOVATIVE PROPERTIES COMPANY			SUGARMAN, SCOTT J	
PO BOX 33427			ART UNIT	PAPER NUMBER
ST. PAUL, MN 55133-3427			2873	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/681,850	JONES ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Scott J. Sugarman	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 12 January 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-45 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-8,10,13-16,19,20,28-31,33,36 and 37 is/are rejected.

7)  Claim(s) 9,11,12,17,18,21-27,32,34,35 and 38-45 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 08 October 2003 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-15-04.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## DETAILED ACTION

### ***Election/Restrictions***

Applicant's election with traverse of Group I (claims 1-27) in the reply filed on January 12, 2005 is acknowledged. The traversal is found persuasive, therefore the restriction requirement is withdrawn and all claims (1-45) will be examined together.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8, 10, 13-16, 19, 20, 28, 31, 33, 36 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Morimoto. Morimoto teaches a light emitting unit having a light source, semiconductor laser (1) (col. 3, lines 59-61), for emitting a beam of output light and a refractive optical unit having a first lens (L2) having a refractive surface that produces spherical aberration (col. 4, lines 64-68) and reduces the divergence of the beam of output light, since it is a positive lens and a second lens (L1) disposed in the beam of output light that has a refractive characteristic that compensates spherical aberration introduced by the first lens (L2) (col. 4, lines 64-68). First lens (L2) can be made from an inorganic material such as glass (col. 5, lines 36-45) and the second lens (L1) can be made from plastic (col. 5, lines 46-51). The beam

is substantially collimated (col. 3, lines 59-61). The second lens (L1) is a meniscus lens (see Table 1). As shown in Table 6, one surface can be planar, and therefore, is aspheric.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 7, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto in view of Gaebe. Morimoto is applied for reasons set forth above, but does not teach a first ball or hemispherical lens. In the system of Gaebe, which does teach a compensating lens for another lens that produces spherical aberration (col. 3, lines 44-62), the first lens can be a ball lens (32). Therefore, it would have been obvious to one of ordinary skill in the art to use a first ball lens that has a subsequent lens for spherical aberration correction, since as shown by Gaebe, this is routinely done in systems that have a first lens producing spherical aberration that is corrected by a second lens.

### ***Allowable Subject Matter***

Claims 9, 11, 12, 17, 18, 21-27, 32-35 and 38-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach or suggest non-rotationally symmetric refractive surfaces, a third lens unit optically after the first and second lenses, an attached meniscus lens as well as the specifically recited divergences in milliradians.

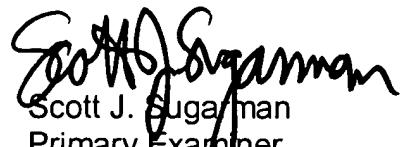
***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wei, Braat, Nagaoka and Eckhardt are cited to show other spherical aberration correction optical systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott J. Sugarman whose telephone number is (571)272-2340.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Scott J. Sugarman  
Primary Examiner  
Art Unit 2873

sjs  
April 2, 2005